

LESSON PLAN
CLASS – VII
Ch 16: Water

Unit	Chapter 16: Water
Class Transaction	Total 14 period (Approx. 40 min each)
Pre-requisite for the course	This lesson requires previous knowledge of- Basic knowledge of 1. Water & its resources 2. Water cycle 3. Uses of water
Assessment of qualifying knowledge	1. Written test 2. Lab activity 3. Group Discussion 4. HW notebook
Objective	Given the content (chapter) the learners will be able to • Give the various sources of water its physical forms and their availability. • Appreciate and understand the distribution of water and water cycle. • Comprehend the phenomena like depletion of water table and significance of rain water harvesting DOL 1, 2, 3, 4
Learning Outcomes	KNOWLEDGE- Students will be able to 1. Summarize significance of water in real life. 2. Understand and explain flow of water through water cycle. 3. Identify sources of water, evaluate and judge the availability of water for life forms. 4. Explain depletion of water and name the factors associated with it. SKILLS AND COMPETENCIES- Students will be able to 1. Define and discuss the significance of water for different life forms in groups and develop collaboration in the process. 2. Illustrate the flow of water in nature and discuss different processes involved in water cycle thus develop critical thinking. 3. Distinguish different sources of water, discuss about them in group and judge them for availability thus develop communication. 4. Appraise the role of an individual in conserving water and developing citizenship.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- <i>Brain Storming</i> -The class would start with a discussion on what the students have already learnt in the previous classes and hence what is it that they would learn now. They would also be told the significance of the topic that they would be studying. <i>Introduction of the topic</i> - classroom discussion on changes <i>Guided practice followed by Independent Practice</i> - NCERT questions to be discussed in the classroom. Techniques to be used:

	Quiz Daily Practice Problem MCQ Peer Assessment Student -teacher interaction, Wipro- G.O.s(web chart, flow chart and differentiation table, compare- contrast matrix), silent/ loud reading, collaborative learning,
Resources	NCERT Science CBSE Exemplar
Self Study, Home Work, Assignments	Independent Practice: Students would do the questions in their H.W notebooks as mentioned in the monthly planner by which we can assess their understanding, writing skill and concept development. HW notebooks to be marked as per the given plan: <i>Assessment Parameters:</i> The total marks for the activity is 5 marks: On time submission 2 mark Presentation/ Neatness (creativity) 2 mark Content (critical thinking and creativity) 6 mark It is also advised that the students come to the class with proper background knowledge of the topic under discussion. They can refer to the resources stated above.
Assessments	Unit tests: - Unit Test 1 (25 marks) - Unit Test 2 (25 marks) - Unit Test 3 (25 marks) - Unit Test 4 (25 marks) Half Yearly Exam (80 marks) Annual Exam (80 marks) PERIODIC TEST By administering pen paper test we assess understanding, conceptual knowledge and critical thinking. INTERNAL ASSESSMENT 20 Marks Subject Enrichment 10 Marks With the help of subject enrichment activities, we assess communication, collaboration, character building and citizenship. Note Book Submission 10 Marks By writing the answers for relevant question we can assess their knowledge, critical thinking and understanding.
Addressing Classroom Diversity	Due to various social backgrounds and multiple intelligences, the classroom might be a diverse arena. The following techniques can be used for various groups: <i>For gifted students:</i> - EXEMPLAR questions to be done. - HOTS questions will be discussed. - Encouragement for referring other resources

	<i>For weak students:</i> • NCERT to be completed • Buddy help to be provided • Provide grade-up classes <i>For differently abled students:</i> • Ignore spelling mistakes and formulae, if not written • Call parents at regular intervals • Provide grade-up classes
Marks	The weightage would be given by CBSE.
Questions for assessment during closure	1. Why is water so important for us? 2. What is the difference between surface water and ground water? 3. What is water management? 4. How can we play an active role in conserving water? 5. What is wilting?

Topic	DAY 1- Water
Class Transaction	Approx. 40 min
Pre-requisite for the course	This topic requires basic knowledge of water and its uses.
Assessment of qualifying knowledge	Group Discussion Questioning
Objective	Students will be able to understand the significance of water.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will be able to</i> - Summarize significance of water in real life. - Various sources of water and their limitations. <u>SKILLS AND COMPETENCIES</u>- Students will be able to ➤ understand and enlist the role of water in real life thus justify its importance. ➤ Will discuss them in groups thus develop collaboration and communication.
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self-Study, Home Work, Assignments	NCERT and EXEMPLAR Questions
Assessments	Response during activity
Topic	DAY 2- Availability of water
Class Transaction	Approx. 40 min
Pre-requisite for the course	This topic requires basic knowledge of sources of water and their uses.
Assessment of qualifying knowledge	Group Discussion Questioning One-word answers
Objective	Students will be able to understand the significance of different sources water.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will able to describe</i> ➤ Sources of water and types of water. ➤ Understand the difference between saline and fresh water. <u>SKILLS AND COMPETENCIES</u>- ➤ Discuss with peers and enlist sources of fresh water and saline water and examine their availability. ➤ Perform activities in groups thus develop collaboration.
Transaction Methodology (The teacher can	Transaction would proceed in the following manner- Anticipatory Set: 5 min Teacher asks questions based on previous day learning

use the mentioned techniques, wherever applicable, and can use any other too.)	DOL 1,2 Strategy- Wipro Technique. Demonstration, Student -teacher interaction, Think- Pair and Share, group work - collaborative learning. Hands on experiment, tabulation, Wipro- G.O.s(web chart, flow chart and compare- contrast matrix), Discussion of topic through Collaborative Learning: 20 min (Critical Thinking and collaboration) Students will discuss- Characteristics of particles of matter in their groups. The experimental set up of activity1.2 and1.4 will be shown and explained to the students step by step and then: The following questions will be asked to check their understanding: a) What type of substances are present in fresh water? b) In what form fresh water is present in nature. c) What type of substances are present in saline water? Guided practice: 10 min. Relevant NCERT Questions Independent Practice: EXEMPLAR Questions Closure: 5 min Involving students in summarizing by asking them to prepare questions based on the topic.
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self-Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Observations and responses from activities
Topic	Day 3 & 4 – Water cycle
Class Transaction	Approx. 40 min
Pre-requisite for the course	This topic requires basic knowledge of various sources and physical states of water.
Assessment of qualifying knowledge	Group Discussion Questioning
Objective	Students will be able to explain water cycle and understand the interplay of various changes and processes in it.
Learning Outcomes	KNOWLEDGE- <i>Students will be able to</i> ➤ Define and summarize water cycle. ➤ Examine the role of different processes involve in water cycle. Define various physical and chemical changes involved in water cycle. SKILLS AND COMPETENCIES- Student will be able to:

	➤ Critically analyses and answer simple reasoning problems ➤ Discuss with peers and examine various process involved in water cycle thus develop critical thinking and collaboration ➤ Perform activities in groups thus develop character and collaboration.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set: 5 min Recapitulation by asking questions based on previous day's learning DOL 1,2, Strategy- Wipro Technique , Student -teacher interaction, Think- Pair and Share, , group work - collaborative learning. Hands on experiment, tabulation, Wipro- G.O.s(web chart, flow chart and compare- contrast matrix), Discussion of topic through Collaborative Learning: 20 min (Critical Thinking, collaboration and communication) The activity 16.3 is discussed in class and explained to the students step by step and then the following questions will be asked to check their understanding: 1. What is water cycle? 2. What are different processes involved in it? Guided practice: 10 min Relevant NCERT Questions and NCERT Questions Closure: 5 min Summarization by students with the muddiest point discussed by the teacher Independent Practice-Students will complete related questions of EXEMPLAR.
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing the topic
Self-Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Observations and responses from activities

Topic	DAY 5- Ground water and its importance
Class Transaction	Approx. 40 min
Pre-requisite for the course	This topic requires basic knowledge of sources of water.
Assessment of qualifying knowledge	Group Discussion Questioning Quiz
Objective	Students will be able to:

	• Explain Surface water and ground water. • Enlist Sources of surface water and ground water.
Learning Outcomes	<u>KNOWLEDGE</u>- Students will be able to explain ➤ Identify various sources of surface water and discuss their availability. <u>SKILLS AND COMPETENCIES</u>- ➤ Discuss in groups about various sources of surface water and ground water while developing communication and collaboration. ➤ Compare the sources on basis of the geography of a region while developing critical thinking and citizenship.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set: 5 min Recapitulation by asking questions based on previous day's learning DOL 1,2,3 Strategy- Wipro Technique Think- Pair and Share, , group work - collaborative learning. Hands on experiment, tabulation, Wipro- G.O.s(web chart, flow chart and compare- contrast matrix), Discussion of topic through Collaborative Learning: 20 min (Critical Thinking and Problem Solving , collaboration and Character Instructional Input: Collaborative work, students will discuss-Page 197 & 198 of NCERT in their groups. Teacher will ask questions related to water cycle like: Q1: What are aquifers? Q2: What are the sources from which we can obtain ground water? Teaching strategy –Discussion, think pair share, explanation by teacher Guided practice: 10 min Students will observe and record their observation in tabular form. Closure: 5 min Summarization by students Independent Practice-Students will complete practical in their note books.
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing by asking them to prepare questions based on the topic.
Self Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Observations and responses from activities
Topic	DAY 6 & 7- Depletion of water table
Class Transaction	Approx. 40 min
Pre-requisite for	This topic requires basic knowledge of sources of water, their uses and the

the course	processes by which water is obtained from them.
Assessment of qualifying knowledge	Group Discussion Questioning
Objective	Students will be able to cite and explain various factors responsible for depletion of water.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will be able to</i> ➤ Identify factors responsible for depletion of water. ➤ Interpret the role of humans in depletion of water. <u>SKILLS AND COMPETENCIES</u> – Students will be able to: ➤ Identify various factors responsible for depletion of water while developing critical thinking. ➤ Perform activities in groups and illustrate various human activities which contribute in depletion of water table and develop communication and collaboration.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set: 5 min Recapitulation by asking questions based on previous day's learning DOL 1,2,3 Strategy- Wipro Technique Think- Pair and Share, , group work - collaborative learning. Hands on experiment, tabulation, Wipro- G.O.s(web chart, flow chart and compare- contrast matrix), Discussion of topic through Collaborative Learning: 20 min (Critical Thinking, collaboration, communication and character) Instructional Input: Collaborative work, students will discuss-Page 198 & 199 of NCERT in their groups. Teacher will ask questions related to topic like: 1. What are various sources responsible for depletion of water? 2. Which human activities produce substances that dump waste in water? Activity: The activity 16.4 and 16.5 is discussed in class and explained to the students step by step. Teaching strategy –Discussion, think pair share, explanation by teacher Guided practice: 10 min Students will draw the electron dot structures of sodium, magnesium, fluorine and and chlorine and show the formation of their respective ions by gain and loss of electrons. Closure: 5 min Summarization by students Independent Practice-Students will complete related questions of EXEMPLAR
Resources	NCERT Science CBSE Exemplar
Closure	Summarization by students with the muddiest point discussed by the

	teacher.
Self-Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Oral Test
Topic	DAY 8 Revision test
Topic	DAY 9-Water management
Class Transaction	Approx. 40 min
Pre-requisite for the course	The topic requires basic knowledge of sources of water, their utility in daily life in human activities.
Assessment of qualifying knowledge	Group Discussion Questioning
Objective	Students will be able to • Explain the terms water management, drip irrigation & rain water harvesting. • Discuss how water management can be applied in daily life to conserve water.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will be able to</i> • Understand the term water management. • Illustrate how usage water can be managed through various activities. <u>SKILL AND COMPETENCIES</u>- 1. Discuss in groups the importance of water management in daily develop critical thinking, character and collaboration in the process. 2. Will summarize the significance of water management techniques in daily life.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set: 5 min Recapitulation by asking questions based on previous day's learning DOL 1,2,3 Strategy- Wipro Technique Think- Pair and Share, , group work - collaborative learning. Hands on experiment, tabulation, Wipro- G.O.s(web chart, flow chart and compare- contrast matrix), Discussion of topic through Collaborative Learning: 20 min (Critical Thinking, collaboration, communication and character) Instructional Input: Collaborative work, students will discuss-Page 199 & 200 of NCERT in their groups. Teacher will ask questions related to topic like: 1. What is rain water harvesting?

	2. How can we reuse stored rain water? Teaching strategy –Discussion, think pair share, explanation by teacher Guided practice: 10 min Students will draw the electron dot structures of sodium, magnesium, fluorine and and chlorine and show the formation of their respective ions by gain and loss of electrons. Closure: 5 min Summarization by students Independent Practice-Students will complete related questions of EXEMPLAR
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing by discussion on muddiest point
Self Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Observations and responses from activities
Topic	DAY 10 & 11- What role do you play?
Class Transaction	Approx. 40 min
Pre-requisite for the course	This topic require basic knowledge about uses of water and water management.
Assessment of qualifying knowledge	Group Discussion Questioning
Objective	Students will be able to ➤ Restate how various changes in lifestyle and daily practices can contribute in conserving water.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will be able to</i> ➤ Enlist how usage water can be managed through various daily life activities. <u>SKILL AND COMPETENCIES</u>- ➤ Discuss with peers and enlist various activities which can be performed using less amount of water and develop citizenship.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set: 5 min Recapitulation by asking questions based on previous day's learning DOL 1,2,3 Strategy- Wipro Technique Think- Pair and Share, , group work - collaborative learning. Hands on experiment, tabulation, Wipro- G.O.s(web chart, flow chart and compare- contrast matrix), Discussion of topic through Collaborative Learning: 20 min

	(Critical Thinking, collaboration, communication and character) Instructional Input: Collaborative work, students will discuss-Page 202 of NCERT in their groups. Teacher will ask questions related to topic like: 1. What is rain water harvesting? 2. How can we reuse stored rain water? Teaching strategy –Discussion, think pair share, explanation by teacher Guided practice: 10 min Students will draw the electron dot structures of sodium, magnesium, fluorine and and chlorine and show the formation of their respective ions by gain and loss of electrons. Closure: 5 min Summarization by students Independent Practice-Students will complete related questions of EXEMPLAR
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing the topic
Self Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Peer assessment
Topic	Day 12: Effect of water scarcity on plants
Class Transaction	Approx. 40 min
Pre-requisite for the course	This topic requires basic knowledge of significance of water for plants.
Assessment of qualifying knowledge	Group Discussion Questioning
Objective	Students will be able to describe the effect of water scarcity of plants.
Learning Outcomes	<u>KNOWLEDGE</u>- <i>Students will be able to</i> ➤ Describe the effect of water scarcity on plants. <u>SKILL AND COMPETENCIES</u>- ➤ Relate how depletion of water is affecting plants and how it can be sorted.
Transaction Methodology (The teacher can use the mentioned techniques, wherever applicable, and can use any other too.)	Transaction would proceed in the following manner- Anticipatory Set: 5 min Recapitulation by asking questions based on previous day's learning Discussion of topic through Collaborative Learning: 20 min (Critical Thinking and Problem Solving , collaboration and Character building and) Instructional Input: Teacher will explain the text, Collaborative work; students will discuss page 202 of NCERT in their groups. Guided practice: 10 min

	Relevant NCERT Questions and NCERT Questions Closure: 5 min Summarization by students Independent Practice -Students will complete related questions of EXEMPLAR.
Resources	NCERT Science CBSE Exemplar
Closure	Involving students in summarizing the topic
Self Study, Home Work, Assignments	Independent Practice: EXEMPLAR Questions
Assessments	Peer assessment
Topic	DAY 13 Closure by mind mapping and open discussion
Topic	DAY 14- Class test